Water Services Center
Emergency Generator Installation

Background:
CRW's Water Services Center (WSC) is powered by two separate feeds originating from the same substation. Should power be lost for an extended period of time, CRW's ability to provide safe drinking water could be compromised.

Project Purpose:
Install back-up power generation to operate critical plant processes through power outage.

Project Summary:
Install diesel powered emergency generator, associated switchgear and automatic transfer switch.

Completion has been delayed due to project management by contractor and long production schedules of critical path items. The switchgear was approved and released for construction in the late summer 2017. Project progress is stalled until switchgear is delivered to the site in February 2019.

Project funded $812,000 CDBG-DR grant administered by Dauphin County. Balance from 2018 series bonds/cash.

Estimated Project Timeline:
- Only work remaining is delivery and installation of switchgear
- Substantial Completion: est. Mid-February 2019

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00007

Purpose:
Infrastructure resiliency (backup power supply)

Project Status:
Construction

Project Cost/Basis:
$1,045,464 / Contract Amount
$500,000 (2019 balance)

Schedule:
Awarded August 23, 2017
Contract Completion: Dec. 2018

Project Contractors:
Gannett Fleming (Design, CM/RPR)
EC: Pagoda Electrical

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:

Water Services Center
Filter Media Replacement and Underdrain Repair

Background:
CRW's Water Services Center (WSC) receives raw water supply from DeHart Reservoir and the Susquehanna River. Our Water Treatment facility physically and chemically (settling, filtration, disinfection, corrosion control) treats source water to a very high level for distribution to our customers. The critical treatment process in the facility is filtration. The filters have operated continuously since 1994. Consequently, we have experienced media degradation and loss (through backwash). The filters have been physically inspected and deficiencies have been identified in the units' underdrain structures. Two filters underdrains were repaired in 2017

Project Purpose:
Restore the remaining six filter cells to original operating condition

Project Summary:
Repair the underdrains and replace the media (sand and anthracite) in the remaining six filters.

Project funded with 2018 series bonds/cash

Estimated Project Timeline:
- Final design underway, estimated completion: December 31, 2018
- Advertise for bids: January 2019.
- Construction: March- September 2019

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00008

Purpose:
Infrastructure resiliency (rehabilitate filters)

Project Status:
Final Design/Bidding

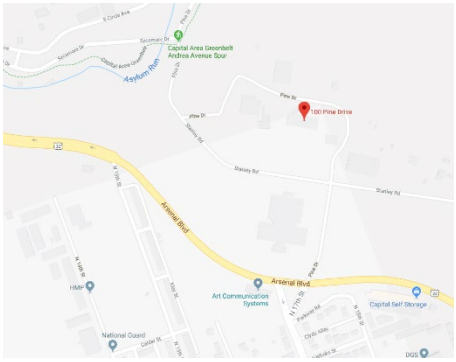
Project Cost/Basis:
$400,170 / Engineer's Estimate

Schedule:
Bid and construct in 2019

Project Contractors:
Gannett Fleming (Design, CM/RPR)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):
Location:



Drinking Water Distribution System
2019 Water Main Replacement

Background:
CRW's finished water distribution system delivers drinking water and fire flows throughout the City of Harrisburg and portions of Susquehanna Township, Paxtang and Penbrook. Much of the system is quite old (Civil War – 1950s) and though constructed of reliable materials (cast and ductile iron pipe), a good deal of the system has outlived its expected service life.

Project Purpose:
Replace portions of the system with observed performance deficiencies (low flow/pressure, high frequency of water main breaks) to avoid failures. Pipe failures cause regulatory violations (sewer back-ups and overflows) and catastrophic, expensive repair needs including sinkholes and street failures. CRW proactively monitors the system to locate leaks so they may be addressed prior to failure.

Project Summary:
Replace water mains in five locations. The projects have been designed and will be bid in early 2019 so construction will be completed this year.

Project will be financed from 2018 series bonds/cash

Estimated Project Timeline:
- Bid January 2019, Construct 2019

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00015

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Bidding

Project Cost/Basis:
$1,265,658 / Engineer's estimate

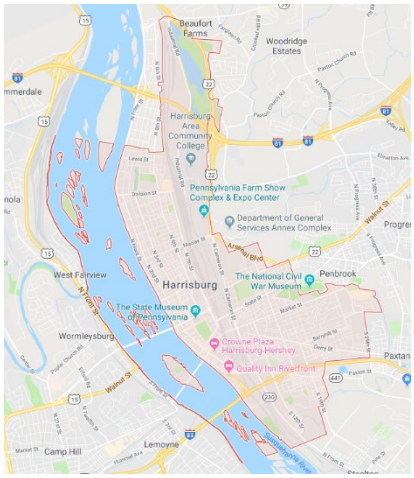
Schedule:
2019

Project Contractors:
Gannett Fleming (Design Engineer)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Water Services Center
Chlorine Scrubber Project

Background:
CRW's Water Services Center (WSC) utilizes chlorine gas for disinfection. Chlorine gas is stored in one-ton cylinders housed in a secure environment following all safety protocols and procedures for handling and application.

Project Purpose:
In the event of a tank release or failure, there is risk of exposure to staff and surrounding areas. Installation of a chlorine gas scrubber system will mitigate this risk.

Project Summary:
Install chlorine gas scrubber system that will convert gas to a liquid solution for controlled management.

Project funded with 2018 series bonds/cash

Estimated Project Timeline:
- Contract awarded: October 31, 2018
- Construction Completion: August 27, 2019

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00045

Purpose:
Compliance (EPA Air quality), Safety

Project Status:
Construction

Project Cost/Basis:
$493,688 / Construction bids

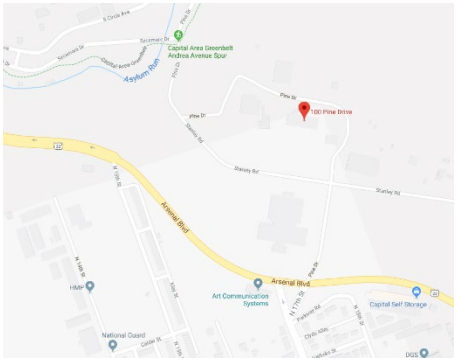
Schedule:
2019 Construction

Project Contractors:
Gannett Fleming (Design, CM/RPR)
GC: Heisey Mechanical
EC: Pagoda Electrical

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Drinking Water - DeHart Primary Transmission Main Mountain Line Clearing

Background:
CRW's primary supply raw water transmission main passes though wooded land crossed by numerous seasonal streams. The alignment should be accessible for access by CRW for routine maintenance or emergency repair. The alignment has become overgrown following a period without any clearing operations.

Project Purpose:
A clearing operation is required to restore operational access.

Project Summary:
Clear 20-ft wide swath along the eight-mile transmission main alignment between DeHart and Dauphin.

Project will be financed from 2018 series bonds/cash

Estimated Project Timeline:
- 2019

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00046

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Bidding

Project Cost/Basis:
$504,225 / Engineer's estimate

Schedule:
2019

Project Contractors:
HRG (Design Engineer)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:

Drinking Water - DeHart Dam Spillway Expansion

Background:
CRW's primary raw water supply is the DeHart Reservoir, impounded by DeHart Dam. The dam was constructed in the early 1940s with an emergency spillway to release flow in a controlled manner during wet weather events. PADEP informed CRW that the spillway capacity is inadequate to safely handle the Probable Maximum Flood event. CRW performed initial evaluation of spillway expansion alternatives along with geotechnical assessment of the impoundment. DEP will be releasing updated Probable Maximum Precipitation values in early 2019. These values will impact the proposed modifications. Gannett Fleming recommended improvements to the existing impoundment that may be performed as part of the spillway work or separately. Further evaluation will be required to assess the best approach to phasing construction.

Project Purpose:
Expand spillway capacity and rehabilitate the upper section of spillway chute.

Project Summary:
Replace the existing straight ogee spillway with an alternate design that can provide greater spillway length within the same opening (e.g., labyrinth, piano key, etc.). Replace the upper portion of the spillway chute and walls and anchor the new spillway into competent bedrock.

Project will be partially funded from DeHart Conservation Easement proceeds but will require additional bond issue/financing.

Estimated Project Timeline:
- Design & Permitting 2019-2020 (after release of PMP)
- Construction 2021-2023 (may extend beyond 2023 if impoundment project is phased separately)

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00050

Purpose:
Compliance (dam safety)
Infrastructure resiliency

Project Status:
Pre-design

Project Cost/Basis:
$30MM / Engineer's estimate
$1,533,333 (2019 balance)

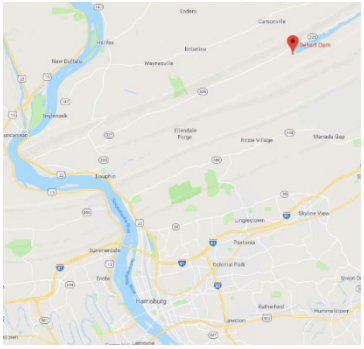
Schedule:
2019-2023+

Project Contractors:
Gannett Fleming (Evaluation)
Design Engineer & GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Drinking Water Distribution System
Cameron Street Water Main Lining

Background:
One of CRW's most challenging sections of distribution system lies in Cameron Street. This is due to the expense and challenging environment for construction. Cameron Street's heavy trucking and commuter traffic loads require heavy traffic control and limited construction periods, and the roadway is a deep, reinforced concrete cartway that creates expensive restoration requirements.

Project Purpose:
Rehabilitate a portion (1/2 mile) of 1880s cast iron main and replace isolation valves

Project Summary:
Line 2,400-LF of 12-inch cast iron water main (Cured In-Place Pipe) and replace 350-LF of smaller diameter crossing pipes at intersections and fire hydrants.

Project will be financed from 2018 series bonds/cash

Estimated Project Timeline:
Bid January 2019, Construct 2019

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00081

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Bidding

Project Cost/Basis:
$2,123,700 / Engineer's estimate

Schedule:
2019

Project Contractors:
HRG (Design Engineer)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:

Water Services Center
Fluoridation System Conversion

Background:
CRW fluoridates drinking water prior to distribution for consumption. The existing fluoridation system requires handling of dry powder (sodium fluorosilicate) for make-up.

Project Purpose:
Retire the existing dry powder fluoridation make-up system which is at the end of its useful life with a liquid (hydrofluorosilicic acid) feed system. The conversion will improve plant maintenance and safety, as the sodium fluorosilicate powder is difficult to contain.

Project Summary:
Replace the existing dry powder fluoridation system with a liquid feed system. Project will also incorporate associated electrical and controls work.

Project funded with 2018 series bonds/cash

Estimated Project Timeline:
- Contract awarded: October 31, 2018
- Construction Completion: August 27, 2019

Fund:
Drinking Water

Munis Project Code:
60800801-80100-00092

Purpose:
Infrastructure resiliency, Safety

Project Status:
Final Design/Bidding

Project Cost/Basis:
$493,688 / Engineer's estimate

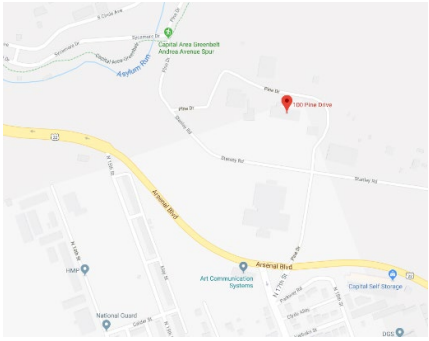
Schedule:
2019 Construction

Project Contractors:
Gannett Fleming (Design, CM/RPR)
GC/EC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



AWTF Primary Anaerobic Digesters Rehabilitation and Improvements

Background:
Waste solids from treatment processes are anaerobically digested to stabilize them for reuse or disposal. Anaerobic digestion produces methane gas used for heat and power generation. Stabilized (Class B) biosolids are dewatered and land applied on area farms

Project Purpose:
Replace failing digester covers and mixing system, piping and valves, associated electrical switchgear and controls, and clean primary digester number two. Project includes new electrical building to enable efficient conversion without interruption. Project combined with headworks screening will address decades of problematic operations caused by rag accumulation impacting heat exchangers, mixing and blocking piping and valves.

Project Summary:
New digester tank covers with integral linear motion mixing systems; new interconnecting piping and valving; new electrical (equipment and building); cleaning and disposal of contents of digester no. 2.

Project will be financed from 2018 bond proceeds

Estimated Project Timeline:
- Contract awarded: May 24, 2018
- Construction Completion: April 13, 2020 (690 days contract)

Fund:
Wastewater

Munis Project Code:
80800801-80100-00020

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Construction

Project Cost/Basis:
$11,480,489 / Construction Bids
$6,040,500 (2019 balance)

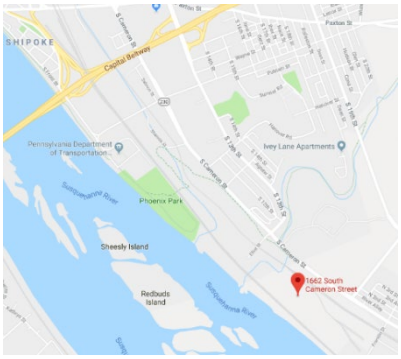
Schedule:
May 2018 – April 2020

Project Contractors:
WRA (Design Engineer & CM/RPR)
GC: Eastern Environmental Contractors
EC: IB Abel
HC: Thermal Logistics

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



AWTF Combined Heat & Power (CHP)/Cogen Rehabilitation

Background:
Methane produced in CRW's AWTF anaerobic digestion process is utilized as fuel for boilers and two 400-HP enginators that generate electricity sold to the grid. The boilers and enginators heat the anaerobic digestors and buildings on the AWTF campus. The combined heat and power system was installed in 1984 and has exceeded its useful life. Maintenance and parts have become increasingly problematic

Project Purpose:
Establish best approach to replacement of existing CHP system.

Project Summary:
Evaluation of AWTF biosolids processes, energy commodity markets, modern equipment needs to recommend best approach for CRW. Aspects of evaluation will include the following: high level methane gas conditioning needed for modern equipment; value of increasing gas/power generation by accepting more hauled waste (sludge, septage & food waste) balanced with necessary capital improvements, as we do not have sufficient pretreatment and storage to effectively undertake; markets for Renewable Information Number (RIN) credits

Project will be financed from 2017 series bonds/cash.

Estimated Project Timeline:
- Evaluation engaged: November 15, 2018 board meeting
- Work will be completed in 2019.

Fund:
Wastewater

Munis Project Code:
80800801-80100-00023

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Evaluation

Project Cost/Basis:
$750,000 / Engineer's estimate

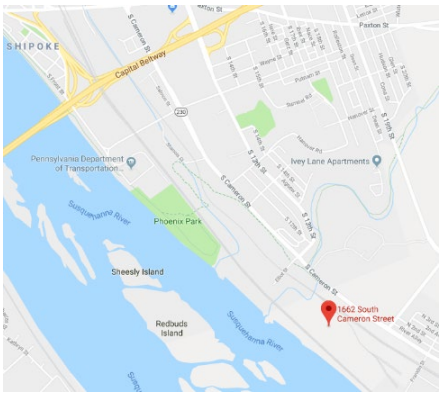
Schedule:
December 2018 – December 2019

Project Contractors:
Arcadis (Design Engineer)

Business Diversity:
MPLs – MBE, 10%, WBE, 5%

Asset ID(s):

Location:



AWTF Primary Clarifiers Rehabilitation

Background:
Solids from all combined flows received at AWTF are settled in the primary clarifiers (following screening and grit removal). Those settled solids are removed with a chain and flight sludge collection system for anaerobic digestion. All mechanical equipment associated with these units has outlived it's expected life, and the process is run inefficiently to accommodate the limited capacity of the sludge collection system.

Project Purpose:
Replace failing mechanical equipment (chains, flights, drives, gear boxes, sludge pumps, etc.). The "thin" sludge we're forced to process due to equipment limitations negatively affects anaerobic digestion.

Project Summary:
Replace failing equipment and rehabilitate structures. Mechanical work will be performed by CRW staff (AWTF Maintenance) – two clarifiers in 2019, two clarifiers in 2020 followed by contracted structural repairs in 2020.

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- Procurement and installation in early 2019 through 2020.

Fund:
Wastewater

Munis Project Code:
80800801-80100-00024

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Execution

Project Cost/Basis:
$8,387,000 / Engineer's estimate
$580,000 (2019 balance)

Schedule:
2019-2020 (CRW mechanical)

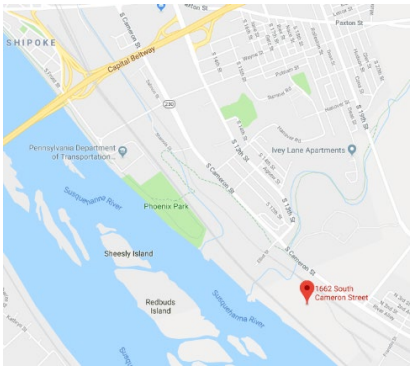
2020-2021 (Contracted structural)

Project Contractors:
WRA (Design Engineer)

Business Diversity:
MPLs – MBE, 10%, WBE, 5%

Asset ID(s):

Location:



Front Street Pump Station Rehabilitation and Improvements

Background:
Front Street Pump Station conveys the bulk of the combined sewage (Front Street & Paxton Creek Interceptors flows) for the City of Harrisburg, Susquehanna and Lower Paxton townships. The station was constructed in 1959. The existing pumping, screening, electrical, instrumentation and ventilation equipment are well beyond their reasonable operating lives.

Project Purpose:
Replace failing mechanical equipment (pumps, screens, motors); bring station up to modern code requirements (electrical, ventilation, building); Maximize pumping capacity within the available layout (increase from ~40 MGD to 60 MGD). Part of City Beautiful H_2O Program Plan – Baseline Improvements that will increase CSO capture from 59% to 80%.

Project Summary:
New solids handling pumps with variable frequency drives; New mechanically cleaned bar screens (3/4" spacing); New electrical switch gear; New instrumentation; New ventilation system; Rehabilitation of internal and external structure; Green Roof for Stormwater Management.

The project will include a major bypass pumping operation for multiple periods within the construction window to enable dewatering of the wet well for equipment installation and power interruptions.

Project will be financed by a PENNVEST (1% APR loan)
Estimated Project Timeline:

- PENNVEST closing/award: November 7, 2018
- Anticipated NTP: December 1, 2018
- Construction Completion: May 4, 2020 (520 days contract)

Fund:
Wastewater

Munis Project Code:
80800801-80100-00025

Purpose:
Compliance (CSO reduction) / Infrastructure resiliency (aged facilities)

Project Status:
Bid Award/Construction

Project Cost/Basis:
$12,488,143 / Construction Bids
$6,814,814 (2019 balance)

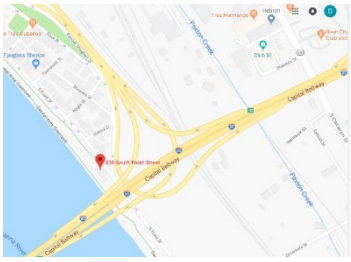
Schedule:
December 2018 – May 2020

Project Contractors:
JMT (Design Engineer)
WRA (CM/RPR)
GC: Eastern Environmental Contractors
EC: Pagoda Electrical
HC: Garden Spot Mechanical
PC: Garden Spot Mechanical

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Wastewater (Combined, Sanitary & Storm) Collection System Rehabilitation

Background:
CRW's collection (combined sewage, separate sanitary and separate storm) system collects and transports wastewater and stormwater originating within the City of Harrisburg to CRW's conveyance (interceptors and pump station) and treatment facilities. Much of the system is quite old (Civil War – 1950s) and constructed of antiquated materials (brick & clay) that have outlived their expected service lives.

Project Purpose:
Rehabilitate priority defects to avoid failures using a variety of methods including conventional replacement and "trenchless" structural pipe lining procedures. Pipe failures cause regulatory violations (sewer back-ups and overflows) and catastrophic, expensive repair needs including sinkholes and street failures. CRW proactively cleans and televises the system to identify pipe defects so they may be addressed prior to failure.

Project Summary:
Rehabilitate priority pipe, manholes and inlets with a combination of design/bid/build, IDIQ and self-performed construction.

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- 2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00026

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Various -

Project Cost/Basis:
$3,234,623 / Engineer's estimate

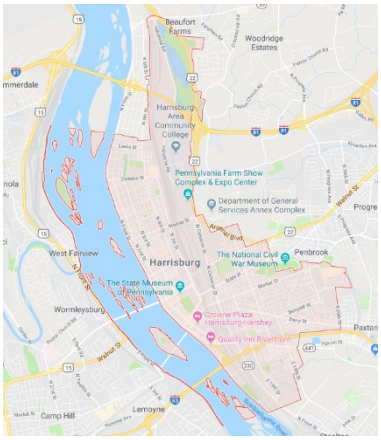
Schedule:
2019

Project Contractors:
HRG (Design Engineer)
Rogele & Abel Recon (IDIQ)

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Wastewater Paxton Creek Interceptor Rehabilitation

Background:
Paxton Creek Interceptor (PCI) conveys combined sewage from over half the City, Susquehanna and Lower Paxton Townships to Front Street Pump Station. CRW had PCI inspected while in service in 2013 (RedZone Robotics) and 2016 after heavy cleaning (Terra). The 1902 cast-in-place concrete pipe is severely compromised with visible defects (exposed rebar, cracks and voids) throughout the 13,500 LF alignment.

Project Purpose:
Rehabilitate the entire interceptor to address pipe defects and avoid failure.

Project Summary:
CRW designed and bid the full restoration in 2017/8. Upon taking the line out of service with a bypass pumping operation, it was revealed that the line is much more severely damaged than observable in 2013 & 2016 while in service. The rehabilitation work, now much more extensive has been impacted by the extreme wet weather experienced in 2018, and progress has been limited. CRW will terminate the existing contract effective 12/2018 and rebid a revised approach in early 2019.

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- 2018-2020

Fund:
Wastewater

Munis Project Code:
80800801-80100-00028

Purpose:
Compliance (PCD early action)
Infrastructure resiliency (failing facilities)

Project Status:
Construction / Evaluation / Rebid

Project Cost/Basis:
$9,749,795 / Engineer's estimate
$5,590,700 (2019 balance)

Schedule:
2019-2020

Project Contractors:
CDM & JMT (Design Engineer)
Northeast Remsco (GC)

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:

Wastewater Arsenal Boulevard Sewer Improvements

Background:
CRW responded to reports of sewage odors in the State Hospital complex area and located compromised pipe and manholes in an unnamed tributary to Asylum Run. Staff addressed the immediate issue, then CRW performed extensive evaluation of the entire sewer system in the area. The run of 24-in vitrified clay pipe had numerous defects along the alignment which runs within the stream. The site is very difficult to access due to the steep wooded slopes down to the stream. It was determined that the best approach to resolve the issue is to replace in an alignment more accessible and out of the stream bank.

Project Purpose:
Replace/rehabilitate failing 24-inch VCP

Project Summary:
Rehabilitation/replacement of approximately 2,500-LF of sewer collector pipe. Work will be a combination of CIPP lining, pipe bursting and new pipe construction. Line will be micro-tunneled under Arsenal Blvd.

Estimated Project Timeline:

- 2016-2020

Fund:
Wastewater

Munis Project Code:
80800801-80100-00061

Purpose:
Compliance (NOV-SSO)
Infrastructure resiliency (failing facilities)

Project Status:
Design

Project Cost/Basis:
$3,292,249 / Engineer's estimate
$852,495 (2019 balance)

Schedule:
2019-2020

Project Contractors:
CDM (Design Engineer)

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:

Wastewater (Combined, Sanitary & Storm) Collection System Cleaning & CCTV Investigation

Background:
Cleaning and inspection of the collection (combined sewage, separate sanitary and separate storm) system has been a priority for CRW since 2013. While we self-perform this work, there have been schedule demands (LTCP H/H Model development) that've been too challenging to address, and there are parts of the system that are too large for our equipment. We have contracted outside professionals to execute this work. We have been able to require over 90% MWBE participation.

Project Purpose:
Develop system-wide condition data to prioritize rehabilitation and improvements

Project Summary:
Contract cleaning and CCTV investigation of sections of the system our staff cannot execute

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- 2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00065

Purpose:
Infrastructure resiliency (aged facilities)

Project Status:
Various -

Project Cost/Basis:
$165,000 / Engineer's estimate

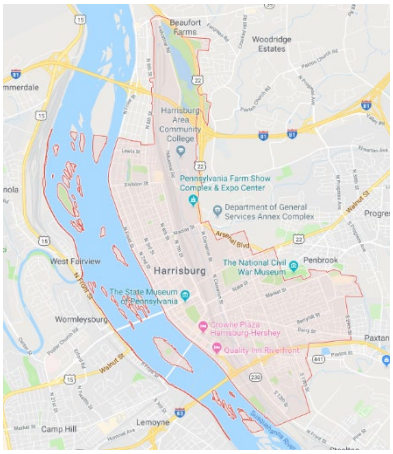
Schedule:
2019

Project Contractors:
WRA (Design Engineer)
TFE (or other MWBE firm)

Business Diversity:
MPLs – MWBE 95%

Asset ID(s):

Location:



Wastewater (Combined, Sanitary & Storm) Collection System Green Stormwater Infrastructure (GSI) Design

Background:
CRW is employing green stormwater infrastructure (GSI) to manage stormwater runoff and prevent flows from entering the combined sewer system, thereby reducing combined sewer overflow (CSO) activity. GSI includes processes mimicking natural systems that infiltrate and evapotranspirate water. Common examples are tree trenches, rain gardens and replacement of impervious surfaces (asphalt, concrete, compacted gravel, etc.) with surfaces that allow infiltration of water.

CRW completed a series of pilot projects in 2018. A number of additional projects are budgeted for 2019. It is important that these systems receive the necessary O&M activities to ensure their successful performance. Those functions are budgeted within this activity.

Project Purpose:
Design and implement additional GSI elements. Coordinate with developers in the City to incorporate GSI elements in their projects. Develop and implement GSI O&M procedures.

Project Summary:
Development and execution of GSI O&M activities with a combination of CRW staff and contractors. Develop and implement GSI element asset data and O&M requirements in Cityworks. Construct additional GSI elements.

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- 2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00070

Purpose:
Compliance (CSO, MS4)

Project Status:
Various -

Project Cost/Basis:
$750,000 / Engineer's estimate

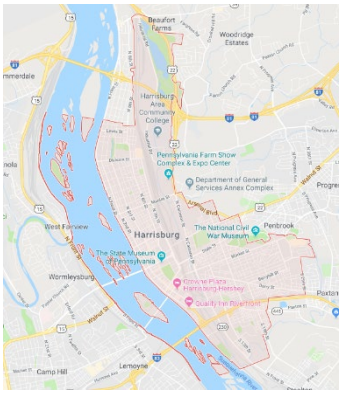
Schedule:
2019

Project Contractors:
AKRF (Design Engineer)
GC & O&M Contractors: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Wastewater (Combined, Sanitary & Storm) Collection System Wet Weather Services

Background:
CRW is bound under the terms of Federal Consent Decree and NPDES Discharge Permits to perform numerous activities to maintain compliance. CRW submitted our City Beautiful H2O Program Plan, an Integrated Wastewater/Stormwater Management Plan that included a Long-Term Control Plan (LTCP) Update in late March 2018. We are now entering a period of negotiations with EPA, DOJ and PADEP that may take up to three years to establish a second Consent Decree that will govern the scope and schedule of wet weather control improvements.

Project Purpose:
Continue to move CRW wet weather compliance forward including participation in EPA negotiations, revise CBH2OPP as required by regulators, design and implement high priority CSO repairs

Project Summary:
Professional Services and construction of improvements in support of CRW wet weather compliance activities.

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- 2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00073

Purpose:
Compliance (CSO, MS4)

Project Status:
Various -

Project Cost/Basis:
$850,000 / Engineer's estimate

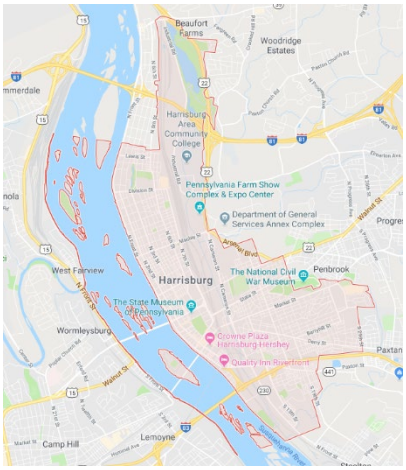
Schedule:
2019

Project Contractors:
CDM Smith (Engineer)
HRMM&L (Special Counsel)
Raftelis (FCA Consultant)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Wastewater Front Street Interceptor - Phase 2 Rehabilitation

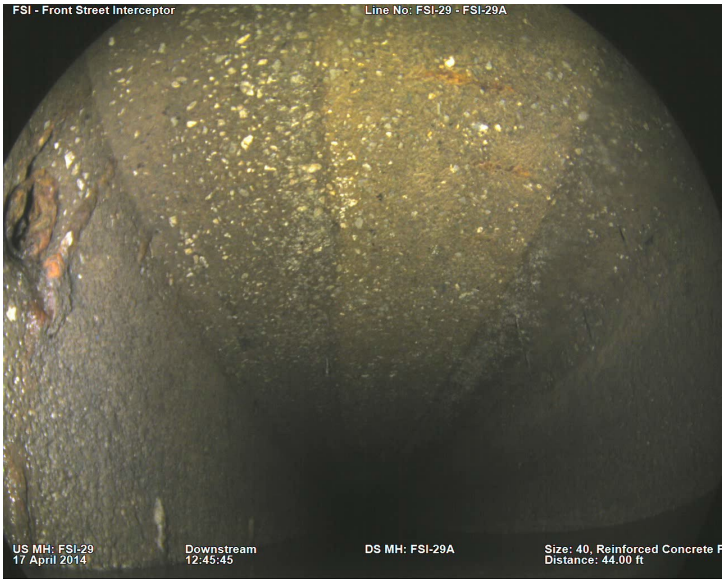
Background:
Front Street Interceptor (FSI) conveys combined sewage from half the City and Susquehanna Township to Front Street Pump Station. CRW had FSI inspected while in service in 2013 (RedZone Robotics) and 2016 after heavy cleaning (Terra). Like PCI, the 1911 cast-in-place concrete pipe is severely compromised with visible defects (exposed rebar, cracks and voids) throughout the 14,000 LF alignment.

Project Purpose:
Rehabilitate the entire interceptor to address pipe defects and avoid failure.

Project Summary:
CRW will incorporate lessons learned during the initial work on PCI in the bidding of this work. Design is underway and will be completed by July 2019. The project will be bid in late 2019 with construction beginning 2020.

Project will require issuance of bonds/financing

Estimated Project Timeline:
- 2018-2021



Fund:
Wastewater

Munis Project Code:
80800801-80100-00083

Purpose:
Compliance (PCD early action)
Infrastructure resiliency (failing facilities)

Project Status:
Design

Project Cost/Basis:
$22,379,322 / Engineer's estimate
$316,075 (2019 balance)

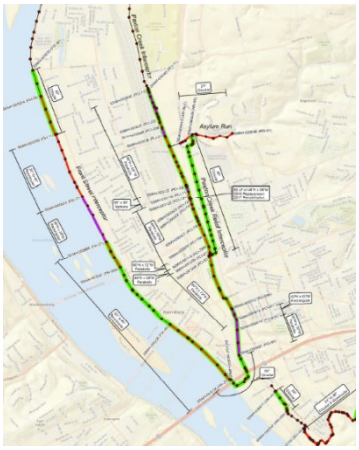
Schedule:
2019-2021

Project Contractors:
WRA (Design Engineer)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Wastewater (Combined, Sanitary & Storm) Collection System 3rd Street Multimodal Project

Background:
CRW is partnered with the City of Harrisburg to implement GSI elements in City Street Improvement projects. The first project is 3rd Street (from Downtown to Olde Uptown).

Project Purpose:
Incorporate visible GSI elements in City streetscape projects to manage stormwater, complementing CSO and MS4 compliance efforts.

Project Summary:
Construction of tree trenches and curb bump-out rain gardens.

Project will be financed with Impact Harrisburg Infrastructure grant

Estimated Project Timeline:
- 2017-2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00084

Purpose:
Compliance (CSO/MS4)

Project Status:
Construction

Project Cost/Basis:
$3,229,226 / Construction bid w/Cos
$510,775 (2019 balance)

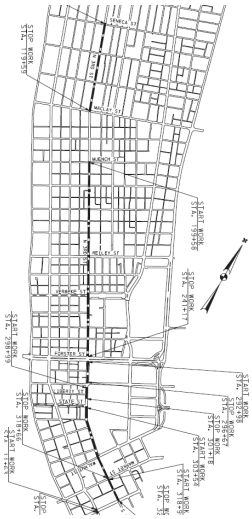
Schedule:
2017-2019

Project Contractors:
Wallace Montgomery & AKRF (Design Engineers)
GC: Doug Lamb Construction

Business Diversity:
MPLs – MBE, 13%, WBE, 2%

Asset ID(s):

Location:



Wastewater (Combined, Sanitary & Storm) Collection System 4th & Dauphin Park GSI

Background:
CRW is partnering with the City and DCNR to renovate a City playground with the design to capture and manage stormwater from the surrounding area. This is the 5th and final park in a series collaboration between the parties.

Project Purpose:
Capture and manage stormwater in green stormwater elements.

Project Summary:
Construct green stormwater elements (rain gardens, pervious basketball court and tree pits)

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- Bid early 2019 for construction in 2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00085

Purpose:
Compliance (SWM)

Project Status:
Design

Project Cost/Basis:
$1,612,620 / Engineer's estimate
$546,113 (2019 balance)

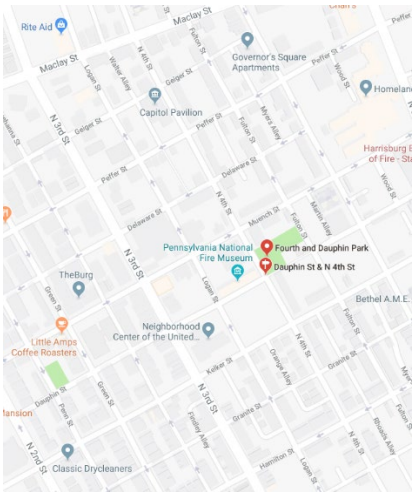
Schedule:
2019

Project Contractors:
WRT/Duffield (Design Engineer)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Wastewater (Combined, Sanitary & Storm) Collection System South Allison Hill GSI

Background:
CRW is partnering with the City, PennDOT, Tri-County Community Action, American Rivers and Impact Harrisburg to develop visible GSI improvements as part of a larger streetscape and façade renovation in the area around 14th and Derry Streets.

Project Purpose:
Capture and manage stormwater in green stormwater elements designed to also serve as traffic calming elements. Rehabilitate failing sewer pipe.

Project Summary:
Construct green stormwater elements (curb bump-out rain gardens and tree trenches) and rehabilitate failing VCP sewer

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- Bid early 2019 for construction in 2019





Fund:
Wastewater

Munis Project Code:
80800801-80100-00089

Purpose:
Compliance (SWM)
Infrastructure resiliency (aged facilities)

Project Status:
Bidding

Project Cost/Basis:
$1,504,106 / Engineer's estimate
$1,057,575 (2019 balance)

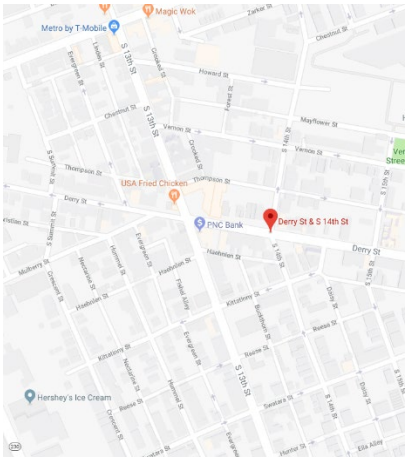
Schedule:
2019

Project Contractors:
AKRF (Design Engineer)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Wastewater (Combined, Sanitary & Storm) Collection System 7rd Street Multimodal Project

Background:
CRW is partnered with the City of Harrisburg to implement GSI elements in City Street Improvement projects. The second project is 7th Street (from Reily to Herr Streets).

Project Purpose:
Incorporate GSI elements in City streetscape projects to manage stormwater, complementing CSO and MS4 compliance efforts.

Project Summary:
Construction of separate storm sewer to continue the separation from Maclay to Reily. Incorporate tree trenches and curb bump-out rain gardens as appropriate and cost effective.

Project will be from bond proceeds/cash

Estimated Project Timeline:
- 2017-2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00090

Purpose:
Compliance (CSO/MS4)

Project Status:
Construction

Project Cost/Basis:
$1,443,450 / Engineer's estimate

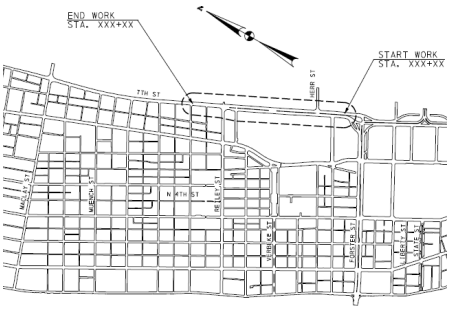
Schedule:
2017-2019

Project Contractors:
Wallace Montgomery & AKRF (Design Engineers)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location:



Stormwater - MS4 Permit Compliance
Paxton Creek TMDL

Background:
CRW owns the City of Harrisburg Municipal Separate Storm Sewer System (MS4) and has applied for individual NPDES permit to operate the system in September 2017. Part of the obligations under Harrisburg's MS4 include a share of Paxton Creek Total Maximum Daily Load (TMDL) Wasteload Reduction for sediment. CRW partnered with Lower Paxton and Susquehanna Townships in this effort and will proceed in the development and execution of projects that will accomplish this goal. Such projects include streambank restoration and renovation of stormwater management facilities.

Project Purpose:
MS4 compliance

Project Summary:
Professional Services and construction of improvements in support of CRW MS4 compliance activities.

Project will be financed from 2017 series bonds/cash

Estimated Project Timeline:
- 2019

Fund:
Wastewater

Munis Project Code:
80800801-80100-00091

Purpose:
Compliance (MS4)

Project Status:
Various -

Project Cost/Basis:
$430,563 / Engineer's estimate

Schedule:
2019

Project Contractors:
HRG/CDM Smith (Engineer)
GC: tbd

Business Diversity:
MPLs – MBE, 15%, WBE, 5%

Asset ID(s):

Location: